

REMARKS

Claims 1-36 are pending in the present application. By virtue of this response, claim 1 has been amended. Accordingly, claims 1-36 are pending and under consideration in the present application. Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented. Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and reasons.

Rejections under 35 U.S.C. § 103(a)

Claims 1-2, 4-6, 8-9, 11, 13-17, and 30-36 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gleason et al. (US 6,456,899) (“Gleason”).

In response, claim 1 has been amended to recite, among other things, the following: “selecting a region of interest (ROI) at a pixel level of processing from the first image, wherein the ROI is a portion of the first image,” and “selecting a non-ROI at a pixel level of processing from the first image, wherein the non-ROI is a portion of the first image.” (Emphasis added). For support, see paragraph [0065], for example.

In this way, the ROIs and non-ROIs selected by the user can be analyzed to more accurately classify regions of images and build training databases. For support, see paragraph [0064], for example.

In contrast to the claims, Gleason discloses methods for semiconductor defect detection by comparing an image from a reference semiconductor chip and an identical region in a second semiconductor chip undergoing inspection. (Col. 2, lines 54-56). In other words, the features of the reference image are measured so that the defects can be identified in the image under inspection. See, for example, FIG. 2 for support. As such, the entire reference image is measured to detect any defect in the corresponding image under inspection. More particularly, the reference image is segmented “into different physical regions where each region corresponds to a different layer of

semiconductor material such as metal or polysilicon.” (Col. 3, lines 31-34). Furthermore, the features of each of the segmented regions of the reference image are measured. This is described in col. 3, line 57 to col. 4, line 1 as follows:

The layer feature extractor 16 measures characteristics or features about each one of the segmented regions in the reference image using the segmented image as a map of where to make measurements. For example, texture, color, or fractal dimension may be measured. The output of the layer feature extractor 16 is a table of numbers, or layer features 19, that represent feature characteristics per reference image region. If the segmented reference image 14 had four different regions identified by the background layer segmenter 13, then the layer feature extractor 16 would measure, via image processing algorithms, features about each one of those four different regions.

(Emphasis added).

For further support, see col. 3, line 28 to col. 4, line 53. As such, Gleason at least fails to disclose or suggest “selecting a region of interest (ROI) at a pixel level of processing from the first image, wherein the ROI is a portion of the first image,” and “selecting a non-ROI at a pixel level of processing from the first image, wherein the non-ROI is a portion of the first image,” as recited in claim 1. (Emphasis added). Therefore, for at least the foregoing reasons Applicant asserts that it would not be obvious for one skilled in the art to analyze images as required by the claims.

Thus, Applicant respectfully submits that for at least the foregoing reasons, independent claim 1 is allowable over Gleason. Accordingly, Applicant submits claims 2, 4-6, 8-9, 11, 13-17, and 30-36 are allowable for at least the reason that each depends from an allowable base claim.

Rejections under 35 U.S.C. § 103(a)

Claims 3, 7, 10, 12, and 18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Gleason in view of Levenson et al. (US 6,750,964) (“Levenson”).

For at least the reason that claims 3, 7, 10, 12, and 18 each depend from an allowable base claim, Applicant submits claims 3, 7, 10, 12, and 18 are allowable over Gleason in view of Levenson. Furthermore, Levenson fails to cure the deficiencies of Gleason.

In sum, none of the references disclose or suggest image analysis as required by the claims. For at least this reason, the alleged prior art references, alone or combined, do not teach or suggest all the claim limitations. As such, the Examiner has failed to provide a clear articulation of the reasons why the claimed invention would have been obvious, as required to establish a *prima facie* case of obviousness (MPEP 2142) for claims 1-18 and 30-36. Accordingly, Applicant respectfully requests that the Examiner identify and provide a prior art reference disclosing the remaining elements of claims 1-18 and 30-36 missing from Gleason and Levenson.

As such, Applicant respectfully requests that the rejections to claims 1-18 and 30-36 under 35 U.S.C. § 103(a) be withdrawn. As such, Applicant respectfully requests reconsideration and allowance of claims 1-18 and 30-36.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. **50-3994** referencing docket no.

LT000239.3. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

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